NUAC Programme

Definition Phase Supplementary Report

The feasibility of a joint enterprise for the carrying out of Air Navigation Services in Danish and Swedish airspace

Executive Summary

JUNE 2007

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1 Introduction

In light of the Single European Sky legislation, the national strategies in Denmark and Sweden, and the general pressure for change in the European Air Traffic Management industry, the NUAC Programme was established with the purpose of investigating the possibilities for a higher degree of cost efficiency for Air Navigation Services in Denmark and Sweden in different strategic scenarios – while maintaining today's high level of flight safety at the least.

As the first firm result from the NUAC Programme, the *NUAC Programme – Definition Phase Final Report* was submitted in February 2007. The report sums up the results of the work conducted in the Definition Phase of the Programme and provides a high-level picture of the aspects in a possible Case for Change regarding Danish and Swedish Air Navigation Services and the future development of the NUAC Programme.[1] This includes a fact-based analysis covering three different scenarios for the potential benefits and costs, HR aspects, and risks for future cooperation. Furthermore, it includes the design of solutions for the scenarios in terms of Mission/Vision, Airspace Design, Business Model and Integration Strategy.

The Supplementary Report submitted in June 2007 extends the original analytical foundation by providing an additional scenario and by elaborating on and refining the existing analysis.[2]

This Executive Summery will provide a high level conclusion of the additional findings.

1.1 Scope for the Supplementary Report

The Supplementary Report extends the original analytical foundation by providing an additional scenario and by elaborating on and refining the existing analysis.

The new Operational Alliance Scenario is developed to ensure a more complete evaluation of possible options for a closer and more formal cooperation between LFV/ANS and Naviair. The foundation of the Operational Alliance includes all operational processes and a fully integrated airspace. The Operational Alliance Scenario, developed in cooperation with key stakeholders, is described in figure 1 below.

The Supplementary Report contains evaluation of three scenarios:

- The **re-investigated Merger Scenario** (from hereon referred to as Merger Scenario)
- The existing **Alliance Scenario**
- The new **Operational Alliance Scenario**.

[1] The report also provides a thorough description of the background as well as the overall aim and scope for the NUAC Programme.

[2] Three separate appendices related to the Supplementary Report contain additional analysis, methodology, and documentation for the Business Case, Business Model and Integration Strategy.

The Supplementary Report contains three additional analyses based on an elaboration of the findings conducted in the Final Report:[3]

- **Business Case.** The overall purpose of the Business Case is to estimate the financial implications and benefit potentials related to implementation of the scenarios. The additional Business Case analysis presented in this report shows the financial implications of the Operational Alliance Scenario and the reinvestigation of the Merger and the original Alliance Scenario. Finally the Business Case includes an additional assessment of new potential benefit areas in relation to a formalised cooperation between LFV/ANS and Naviair.

- **Business Model.** The additional Business Model analysis presented in this report outlines a high level Business Model covering all relevant subjects, i.e. the company form and ownership structure, processes and tasks, organisational structure, and a coherent governance structure covering all three organisations i.e. LFV/ANS, Naviair and NUAC Company.

- **Integration Strategy.** The overall purpose of the additional analysis is to develop a strategy for the integration of the Air Navigation Service processes based on the implementation of the integration initiatives (defined on the basis of the benefit initiatives identified in the Business Case) supplementing the scenario based Integration Strategy in the Final Report. The Integration Strategy provides the framework and platform for the integration and implementation planning in the subsequent Design and Development Phase.

[3] The original report regarding HR Aspects ("NUAC Programme – Definition Phase Final Report", Appendix no. 9) has also been analysed as part of the analyses covered by this report in order to ensure that the Operational Alliance Scenario is covered by the original analyses. The conclusion from this work was that the original report in a sufficient manner also covered the identified HR Aspects relevant for the affected staff groups in the Operational Alliance Scenario.

Figure 1 Supplementary analysis scenarios

	Merger scenario	Alliance scenario	Operational Alliance scenario
Description	• Merger of relevant parts of the two organisations LFV/ANS and Naviair into one organisation • NUAC is responsible for the carrying out the Air Traffic Service provision within Danish and Swedish airspace and working in a FAB environment with possibility of one en-route charging zone and a common unit rate. • Drive the cost base down through innovative approaches to organisational structure and resource allocation	• As independent organisations in a closer corporation LFV/ANS and Naviair are establishing a co-owned Alliance Company for the carrying out of certain support functions. This with only minor changes to the operational parts of the two organisations working in a FAB environment with possibility of one en-route charging zone and a common unit rate.	• LFV/ANS and Naviair as co-owners of a NUAC Company carrying out the provision of Air Navigation Services within Danish and Swedish fully integrated airspace • The services covers all Air Navigation Services except MET, AIS and TWR. • Support functions will be provided in NUAC Company in accordance with Common Requirements and when necessary to reach the full potential of the operational core business
Rationales	• To investigate the feasibility and effects of the most comprehensive Scenario for cooperation in order to ensure highest possible degree of cost-effectiveness/cost reduction and strategic alignment with Single European Sky regulations as well as the national strategies • To show clear and formalised lines of command in a merged company and entail management of all core processes and related support processes	• The Scenario should to the largest extent possible be in alignment with Single European Sky regulations and the national strategic directions outlined in Denmark and Sweden • Find out to what extent the cost-effectiveness could be reached without influencing the core business within LFV/ANS and Naviair • To give the answer regarding to what extent the Strategic Rationales for the NUAC Programme could be met.	• To investigate the feasibility and effects of an scenario with focus on cost effectiveness and national corporate strategies without compromising SES and national strategic directions • To investigate to what extent the cost-effectiveness/cost reductions could be reached when only including the core business in the NUAC Alliance Company

2 Conclusions

The analysis confirms the results from the Definition Phase Final Report showing significant financial benefits for all three scenarios presented in this Supplementary Report: Merger, Alliance, and Operational Alliance. However, the re-investigated Merger scenario will yield even more financial benefits than the original Merger Scenario in the Final Report.

No absolute barriers to the implementation of NUAC Programme or new substantial risks which cannot be mitigated have been identified.

Aside from the further identified financial benefits by implementing NUAC, the analysis has developed a Business Model for each scenario which balances the need for cross-border airspace integration and joint cross-border Air Navigation Service provision with the requirement of national ownership and maintaining national sovereignty.

Finally, the analysis has developed a flexible Integration Strategy covering all initiatives and balancing an early harvesting of financial and socio-economic benefits with effective management of risks and complexity to ensure sustainability and safety.

Consequently, the NUAC Programme has completed the Definition Phase, and the Final and Supplementary reports, together with the underlying Socio-economic Analysis, present exhaustive results which form the platform for decision-making regarding the future development of the NUAC Programme.

The following sub-sections contain findings and conclusions in each analytical area.

2.1 Business Case

The annual savings from the year 2020 and onwards for the scenarios are: €29.5 million in the Merger Scenario, €13.0 million in the Operational Alliance Scenario, and €12.0 million in the Alliance Scenario.

Calculated as net present value (NPV) in the fiscal years 2006 through 2020[4], the Merger Scenario shows an NPV of €172.4 million, the Operational Alliance Scenario an NPV of €72.6 million, and the Alliance Scenario an NPV of €68.8 million.

The benefit potentials are mainly generated through reductions in the need for resources. Analyses so far indicate that the reductions can be accommodated through natural attrition and general staff turnover.

The Merger Scenario realises the highest reduction in the need for resources since it is the most comprehensive scenario covering a full airspace integration and the integration of all (expect Tower) administrative, technical, and operational functions into one NUAC Company.

Savings related to reduction in the need for resources are primarily realised through standardisation of current processes and elimination of duplicate functions. The resources in the administration and technology areas have the highest benefit potential by comparison.

[4] The NUAC Programme has generated costs from 2006 and the Business Case calculations end by 2020.

Figure 2 Financial implications of implementing the scenarios

	Merger Scenario	Alliance Scenario	Operationel Alliance Scenario
Annual Savings	€ 29,5 mill.	€ 12,0 mill.	€ 13,0 mill.
NPV (2006-2020)	€ 172,4 mill	€ 68,8 mill	€ 72,6 mill
FTE Reduction	233 FTE	104 FTE	129 FTE
Integration Costs	€ 30,1 mill	€ 17,3 mill	€ 22,9 mill

2.2 Business Model

A unique Business Model has been developed for each scenario. The business model reflects the strategic framework for the NUAC Programme and supports an optimal handling of the specific management as well as organisational opportunities and challenges in each scenario. The business models contain four elements:

- **Company form and ownership structure** outlines the most important bounds for the design of the NUAC Company. The main conclusions are that a future NUAC Company should be a company with limited liability, i.e. a Danish Aktieselskab, a Swedish Aktiebolag, or a European SE Company, and that the NUAC Company should be owned mutually (50% - 50%) by the retained organisations who will be responsible for managing the ownership.
- **Processes and tasks** outlines the core and support processes for the NUAC Company in each scenario and thus provides the core business set-up for the NUAC Company. The scenarios differentiate on the number of processes that are included in the NUAC Company. The Merger Scenario represents the most comprehensive business set-up since it integrates all processes in the NUAC Company. The foundation for the Operational Alliance is the operational processes, while the Alliance Scenario is built around the technology support processes.
- **Organisational structure** outlines the organisational set-up for handling the specific processes and tasks to realise the vision of NUAC in the best possible way. The organisational structures for all scenarios are designed to maximise safety, efficiency, and to improve cost-efficiency.
- **Governance structure** outlines the internal and external governance structure for the NUAC Company. A single line management structure is proposed with a clear management hierarchy to enable a robust decision-making. The hierarchy contains three well-defined roles with clear responsibilities: General Assembly, Board, and CEO. The external governance structure will enable the three organisations (NUAC, Naviair, and LFV/ANS) to govern according to their specific objectives and support the joint objective of delivering efficient and safe Air Navigation Services. This will be achieved through coordination at different management levels and supported by an

escalation principle. Finally, the relation architecture for NUAC is outlined and consists of a formalised structure of the roles and tasks for NUAC's relations to major stakeholders.

2.3 Integration Strategy

The Integration Strategy is based on the business case initiatives supplemented by activities necessary to achieve a complete transition towards the NUAC Company.

Two approaches have been considered in relation to the implementation of the initiatives: a scenario approach covering four scenarios representing different levels of integration, and a purely initiative-based approach to allow new combinations of initiative implementations and more flexibility in the overall implementation approach.

The level of flexibility has been assessed based on an analysis of the interdependencies between the initiatives to define the constraints that they impose on the implementation approaches.

The implementation of the initiatives has been assessed based on four perspectives: Benefit, Risk/complexity, Sustainability, and Speed. The assessment has led to a primary focus on Benefit and Risk/complexity since they support the strategic rationales for the NUAC Programme, i.e. cost-efficiency and flight safety. Sustainability issues will be covered by taking all risk and complexity issues into account in the Risk/complexity perspective. Speed has been given less consideration due to the safety imperative.

A comparison of the four perspectives shows that there are no major differences in the sequencing of the initiatives. The most important differentiator is the expected timescales of each scheme due to the difference in the number of phases and the number of parallel initiative implementations and hence the level of “compression” of the timescales.

It is assumed that the initiatives can be implemented with the same overall timeframe as earlier laid down for the scenarios, i.e. implementation in 2008 to 2011 and full operation from 2011 and onwards.

3 NUAC Programme going forward

The NUAC Programme has completed the Definition Phase, and the *NUAC Programme – Definition Phase, Final Report* and the *NUAC Programme – Definition Phase, Supplementary Report* together with the underlying Socio-economic Analysis should be seen as the platform for decision-making regarding the future development of the NUAC Programme, thereby moving towards the realisation of the Single European Sky legislation and the political visions for air transport in Denmark and Sweden.